

Appl. No. 09/998,512
Amdt. dated August 24, 2004
Reply to Office Action of June 4, 2004

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A process for separating oxygenated hydrocarbon from an olefin composition comprising:

contacting an oxygenate with a small pore molecular sieve catalyst to form an olefin composition, wherein the olefin composition comprises olefin comprising at least 20 wt% ethylene and propylene on a water containing basis, water and oxygenated hydrocarbon;

contacting the olefin composition with a quench fluid to cool the olefin composition and form a liquid water containing stream and an olefin containing vapor stream, wherein the water containing stream comprises at least 1 wt % oxygenated hydrocarbon;

separating the water containing stream from the vapor stream;

compressing the vapor stream;

separating an olefin product stream and an oxygenated hydrocarbon containing stream from the compressed vapor stream by contacting the compressed vapor stream with a wash medium selected from the group comprising water and/or methanol;

separating the olefin product stream into an ethylene containing stream and a propylene containing stream and recovering the separated streams;

combining the water containing stream and the oxygenated hydrocarbon containing stream; and

recovering oxygenated hydrocarbon product from the combined water containing stream and liquid oxygenated hydrocarbon containing stream.

2. Canceled.

3. (Original) The process of claim 2 claim 1, further comprising polymerizing the ethylene containing stream.

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4. (Original) The process of claim 2 claim 1, further comprising polymerizing the propylene containing stream.

5. (Original) The process of claim 1, wherein the water containing stream and the oxygenated hydrocarbon containing stream are first combined and then separated in a separator.

6. (Original) The process of claim 1, wherein the water containing stream and the oxygenated hydrocarbon containing stream are both combined and separated within a separator.

7. (Original) The process of claim 1, wherein the vapor stream is compressed at a pressure of at least 30 psia.

8. (Original) The process of claim 1, wherein the oxygenated hydrocarbon product contains not greater than 50 wt % water.

9. (Original) The process of claim 8, wherein the oxygenated hydrocarbon product contains not greater than 40 wt % water.

10. (Original) The process of claim 9, wherein the oxygenated hydrocarbon product contains not greater than 30 wt % water.

11. (Original) The process of claim 10, wherein the oxygenated hydrocarbon product contains not greater than 25 wt % water.

12-15. Canceled.